

# Partnership in Basic Plasma Science and Engineering

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## *Program Solicitation*

***NSF 02-184***

DIVISION OF PHYSICS  
DIVISION OF CHEMICAL AND TRANSPORT SYSTEMS  
DIVISION OF DESIGN, MANUFACTURE, AND INDUSTRIAL INNOVATION  
DIVISION OF ELECTRICAL AND COMMUNICATIONS SYSTEMS  
DIVISION OF ATMOSPHERIC SCIENCES  
DIVISION OF MATHEMATICAL SCIENCES

**LETTER OF INTENT DUE DATE(S) (*optional*): November 1, 2002**

**FULL PROPOSAL DEADLINE(S) :  
January 13, 2003 By 5PM Local Time**



**NATIONAL SCIENCE FOUNDATION**



**DEPARTMENT OF ENERGY**

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# SUMMARY OF PROGRAM REQUIREMENTS

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## GENERAL INFORMATION

**Program Title:** Partnership in Basic Plasma Science and Engineering

**Synopsis of Program:** The Directorates for Engineering, Geosciences, and Mathematics and Physical Sciences of the NSF and the Office of Science/Office of Fusion Energy Sciences of the Department of Energy are continuing in FY2003 the joint Partnership in Basic Plasma Science and Engineering begun in FY1997 and continued in FY2000. As stated in the original solicitations (NSF 97-39 and NSF 99-159), the goal of the initiative is to enhance plasma research and education in this broad, multidisciplinary field by coordinating efforts and combining resources of the two agencies. The initiative will address fundamental issues in plasma science and engineering that can have impact in other areas or disciplines in which improved basic understanding of the plasma state is needed.

### Cognizant Program Officer(s):

- Dr. Ronald McKnight, Program Director, Office of Fusion Energy Sciences, DoE/SC, telephone: 301-903-4597, e-mail: [Ronald.McKnight@science.doe.gov](mailto:Ronald.McKnight@science.doe.gov).
- Dr Michael Crisp, Program Director, Office of Fusion Energy Sciences, DoE/SC, telephone: 301-903-4883, e-mail: [Michael.Crisp@science.doe.gov](mailto:Michael.Crisp@science.doe.gov).
- Dr. Barry Schneider, Theoretical Physics, Program Director, MPS, Physics, telephone: 703-292-7383, e-mail: [bschneid@nsf.gov](mailto:bschneid@nsf.gov).
- Dr. Denise Caldwell, Atomic, Molecular, Optical and Plasma, Program Director, MPS, Physics, telephone: 703-292-7371, e-mail: [dcaldwel@nsf.gov](mailto:dcaldwel@nsf.gov).
- Dr. Michael Steuerwalt, Applied Mathematics, Program Director, MPS, Mathematical Sciences, telephone: 703-292-4860, e-mail: [Dr. Michael Steuerwalt, Division of Mathematical Sciences, NSF/MPS, 703-292-4860, msteuerw@nsf.gov](mailto:Dr.Michael.Steuerwalt,DivisionofMathematicalSciences,NSF/MPS,703-292-4860,msteuerw@nsf.gov).
- Dr. Lawrence Goldberg, Program Director, ENG, Electrical and Communications Systems, telephone: 703-292-8339, e-mail: [lgoldber@nsf.gov](mailto:lgoldber@nsf.gov).
- Dr. Farley Fisher, Program Director, ENG, Chemical and Transport Systems,, telephone: 703-292-8371, e-mail: [ffisher@nsf.gov](mailto:ffisher@nsf.gov).
- Dr. Delcie Durham, Program Director, ENG, Design Manufacture and Industrial Innovation, telephone: 703-292-1330, e-mail: [ddurham@nsf.gov](mailto:ddurham@nsf.gov).
- Dr Kile Baker, Program Director, GEO, Atmospheric Sciences, telephone: 703-292-7060, e-mail: [kbaker@nsf.gov](mailto:kbaker@nsf.gov).
- Dr Thomas Bogdan, Program Director, GEO, Atmospheric Sciences, telephone: 703-292-8529, e-mail: [tbogdan@nsf.gov](mailto:tbogdan@nsf.gov).

### Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.041 --- Engineering
- 47.050 --- Geosciences
- 47.049 --- Mathematical and Physical Sciences

## ELIGIBILITY INFORMATION

- **Organization Limit:** Proposals may be submitted by individual investigators or small groups from universities and non-profit organizations. Synergistic collaborations among researchers and collaborations or partnerships with industry or government are encouraged when appropriate, though no funds will be provided to these organizations. The support of collaborations between university and industrial researchers can also utilize the mechanism of the GOALI Program (NSF 98-142) <http://www.nsf.gov/cgi-bin/getpub?nsf98142>. Due to the limited availability of funds, prospective applicants are strongly urged to discuss prospective proposals with one of the program directors listed at the end of this document.

Proposals in plasma science and engineering submitted to the disciplinary programs before the deadline are eligible for consideration under this program solicitation. The Division of Atmospheric Science requires that any proposal requesting funding on topics covered by this program solicitation must be submitted to this competition and comply with all the deadlines and other stated requirements. We strongly urge all prospective applicants to contact the relevant Program Officer.

- **PI Eligibility Limit:** An applicant may submit only one proposal as Principal or Co-Principal Investigator.
- **Limit on Number of Proposals:** None

## AWARD INFORMATION

- **Anticipated Type of Award:** Standard or Continuing Grant
- **Estimated Number of Awards:** 25-30
- **Anticipated Funding Amount:** \$10-12 million over a three year period, subject to availability of funds

## PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

### *A. Proposal Preparation Instructions*

- **Letters of Intent:** Submission of Letters of Intent is optional. Please see the full program announcement/solicitation for further information.
- **Full Proposals:** Standard Preparation Guidelines
  - Standard GPG Guidelines apply.

### *B. Budgetary Information*

- **Cost Sharing Requirements:** Cost Sharing is not required.
- **Indirect Cost (F&A) Limitations:** Not Applicable.
- **Other Budgetary Limitations:** Not Applicable.

### ***C. Deadline/Target Dates***

- **Letters of Intent (*optional*):** November 1, 2002
- **Preliminary Proposals (*optional*):** None
- **Full Proposal Deadline Date(s):**

January 13, 2003 By 5PM Local Time

### ***D. FastLane Requirements***

- **FastLane Submission:** Required
- **FastLane Contact(s):**
  - Ramona Winkelbauer, Computer and FastLane Specialist, Physics, telephone: 703-292-7390, e-mail: [rwinkelb@nsf.gov](mailto:rwinkelb@nsf.gov).

## **PROPOSAL REVIEW INFORMATION**

- **Merit Review Criteria:** National Science Board approved criteria. Additional merit review considerations apply. Please see the full program announcement/solicitation for further information.

## **AWARD ADMINISTRATION INFORMATION**

- **Award Conditions:** Standard NSF award conditions apply.
- **Reporting Requirements:** Standard NSF reporting requirements apply.

## **I. INTRODUCTION**

The Directorates for Engineering (Divisions of Electrical and Communications Systems, Chemical and Transport Systems, and Design Manufacture and Industrial Innovation), Geosciences (Division of Atmospheric Sciences) and Mathematics and Physical Sciences (Divisions of Mathematical Sciences and Physics) of the National Science Foundation (NSF) and the Office of Science/Office of Fusion Energy Sciences (SC/OFES) of the Department of Energy (DoE) are continuing in FY2003 the joint Partnership in Basic Plasma Science and Engineering begun in FY1997 and continued in FY2000. As stated in the original solicitations (NSF 97-39, NSF 99-159), which is superceded by the present solicitation, the goal of the initiative is to enhance plasma research and education in this broad, multidisciplinary field by coordinating efforts and combining resources of the two agencies.

## **II. PROGRAM DESCRIPTION**

Dynamic growth in new research areas, fostered by the development of new investigative techniques and tools, continue to present an unusual window of opportunity for fundamental studies in basic plasma science and engineering. At the same time, economic forces are driving the need for more fundamental knowledge as underpinning for the many applications of plasmas in modern technology. This initiative, a continuation of the successful NSF/DoE Partnership in Basic Plasma Science and Engineering begun in FY1997, is a response to these fundamental research opportunities in plasma science and engineering.

The focus of the initiative continues to be fundamental issues of plasma science and engineering that can have impact in other areas or disciplines in which improved basic understanding of the plasma state is needed. Proposals should discuss effective ways in which education is integrated within the research programs. Proposals directly related to fusion energy studies are not eligible. Some of the general research areas which are included are:

- Chaos, Turbulence and Structure in Plasmas
- Strongly Coupled Coulomb Systems in Plasmas
- Plasmas in Magnetic Fields
- Intense Field Matter Interactions in Plasmas
- Advanced Methods for Plasma Modeling and Simulation
- Control of Plasma Processes
- Plasma Transport and Surface Interactions
- Plasma Diagnostics
- Plasma Modification, Synthesis and Processing of Materials and Micro/Nano Devices
- Plasmas in Environmental Science and Technology
- Solar plasmas, plasmas in interplanetary space, Earth and other planetary magnetospheres and atmospheres.

Although the above list is intended to be illustrative, it directly reflects the interests and responsibilities of the NSF Divisions participating in the initiative and the goals of the SC/OFES.

## **III. ELIGIBILITY INFORMATION**

The categories of proposers identified in the [Grant Proposal Guide](#) are eligible to submit proposals under this program announcement/solicitation.

## IV. AWARD INFORMATION

Funding for this initiative is derived from a coordination of existing resources of the participating NSF Divisions, complemented by resources in the SC/OFES at DoE. Award sizes are anticipated to range from \$25,000 to \$200,000 per year with a duration of up to three years, depending upon the nature of the research activity. Subject to the availability of funds, the two agencies have designated approximately \$10-12 million over a three year period to support a total of 25-30 awards in this competition. Prospective applicants funded in the prior NSF/DoE Partnership in Basic Plasma Science and Engineering desiring renewed support should submit to this solicitation.

Estimated program budget, number of awards and average award size/duration are subject to the availability of funds.

## V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS

### A. Proposal Preparation Instructions

**Letters of Intent:** In order to provide guidance to prospective proposers on the appropriateness of the subject matter for the planned submission prior to the proposal deadline of January 13, 2003, a brief letter of intent to submit a proposal, sent by electronic mail to [pselett@nsf.gov](mailto:pselett@nsf.gov) no later than November 1, 2002, would be quite helpful. The letter should clearly state that it is in response to this solicitation and, if known, indicate the NSF Program Officer most closely associated with the proposed activity (see Inquiries section below). The letter should contain the name and electronic mail addresses of the PI and any Co-PI's, their institutions, and a few sentences description of what would be proposed. Please send the letter in clear text, with no attachments. Note, that the letters are not mandatory and will not be used to exclude any PI/Co-PI from submitting a final proposal.

### Full Proposal:

Proposals submitted in response to this program announcement/solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF *Grant Proposal Guide* (GPG). The complete text of the GPG is available electronically on the NSF Web Site at: <http://www.nsf.gov/cgi-bin/getpub?gpg>. Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov).

Proposers are reminded to identify the program solicitation number (NSF 02-184) in the program announcement/solicitation block on the *Cover Sheet For Proposal to the National Science Foundation*. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.

### B. Budgetary Information

Cost sharing is not required in proposals submitted under this Program Solicitation.

### C. Deadline/Target Dates

Proposals must be submitted by the following date(s):

**Letters of Intent (optional):** November 1, 2002

**Full Proposals by 5:00 PM local time:**

January 13, 2003 By 5PM Local Time

## **D. FastLane Requirements**

Proposers are required to prepare and submit all proposals for this Program Solicitation through the FastLane system. Detailed instructions for proposal preparation and submission via FastLane are available at: <http://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this Program Solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this announcement/solicitation.

*Submission of Electronically Signed Cover Sheets.* The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see [Chapter II, Section C](#) of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Proposers are no longer required to provide a paper copy of the signed Proposal Cover Sheet to NSF. Further instructions regarding this process are available on the FastLane website at: <http://www.fastlane.nsf.gov>.

## **VI. PROPOSAL REVIEW INFORMATION**

### **A. NSF Proposal Review Process**

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by Program Officers charged with the oversight of the review process. NSF invites the proposer to suggest, at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to that principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (NSB 97-72). All NSF proposals are evaluated through use of the two merit review criteria. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued Important Notice 127, *Implementation of new Grant Proposal Guide Requirements Related to the Broader Impacts Criterion*. This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. NSF continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the GPG incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the GPG specifies that Principal Investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.



Effective October 1, 2002, NSF will return without review proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

The two National Science Board approved merit review criteria are listed below (see the [Grant Proposal Guide](#) Chapter III.A for further information). The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which he/she is qualified to make judgements.

**What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

**What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

***Integration of Research and Education***

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

***Integrating Diversity into NSF Programs, Projects, and Activities***

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

**Additional Review Criteria**

Proposal review will be managed jointly by a working group of Program Directors from NSF and DoE participating in the initiative.

**B. Review Protocol and Associated Customer Service Standard**

All proposals are carefully reviewed by at least three other persons outside NSF who are experts in the particular field represented by the proposal. Proposals submitted in response to this announcement/solicitation will be reviewed by Mail Review followed by Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the identities of reviewers, are sent to the Principal Investigator/Project Director by the Program Director. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In most cases, proposers will be contacted by the Program Officer after his or her recommendation to award or decline funding has been approved by the Division Director. This informal notification is not a guarantee of an eventual award.

NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the closing date of an announcement/solicitation or the date of proposal receipt (whichever is later). The interval ends when the Division Director accepts the Program Officer's recommendation.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

## **VII. AWARD ADMINISTRATION INFORMATION**

### **A. Notification of the Award**

Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program Division administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See section VI.A. for additional information on the review process.)

### **B. Award Conditions**

An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (NSF-GC-1)\* or Federal Demonstration Partnership (FDP) Terms and Conditions;\* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreement awards also are administered in accordance with NSF Cooperative Agreement Terms and Conditions (CA-1). Electronic mail notification is the preferred way to transmit NSF awards to organizations that have electronic mail capabilities and have requested such notification from the Division of Grants and Agreements.

\*These documents may be accessed electronically on NSF's Web site at [http://www.nsf.gov/home/grants/grants\\_gac.htm](http://www.nsf.gov/home/grants/grants_gac.htm). Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (301) 947-2722 or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov).

More comprehensive information on NSF Award Conditions is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Web site at <http://www.nsf.gov/cgi-bin/getpub?gpm>. The GPM is also for sale through the Superintendent of Documents, Government Printing Office (GPO), Washington, DC 20402. The telephone number at GPO for subscription information is (202) 512-1800. The GPM may be ordered through the GPO Web site at <http://www.gpo.gov>.

### **C. Reporting Requirements**

For all multi-year grants (including both standard and continuing grants), the PI must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period.

Within 90 days after the expiration of an award, the PI also is required to submit a final project report. Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project reporting system, available through FastLane, for preparation and submission of annual and final project reports. This system permits electronic submission and updating of project reports, including information on project participants (individual and organizational), activities and findings, publications, and other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system.

## **VIII. CONTACTS FOR ADDITIONAL INFORMATION**

General inquiries regarding Partnership in Basic Plasma Science and Engineering should be made to:

- Dr. Ronald McKnight, Program Director, Office of Fusion Energy Sciences, DoE/SC, telephone: 301-903-4597, e-mail: [Ronald.McKnight@science.doe.gov](mailto:Ronald.McKnight@science.doe.gov).
- Dr. Michael Crisp, Program Director, Office of Fusion Energy Sciences, DoE/SC, telephone: 301-903-4883, e-mail: [Michael.Crisp@science.doe.gov](mailto:Michael.Crisp@science.doe.gov).
- Dr. Barry Schneider, Theoretical Physics, Program Director, MPS, Physics, telephone: 703-292-7383, e-mail: [bschneid@nsf.gov](mailto:bschneid@nsf.gov).
- Dr. Denise Caldwell, Atomic, Molecular, Optical and Plasma, Program Director, MPS, Physics, telephone: 703-292-7371, e-mail: [dcaldwel@nsf.gov](mailto:dcaldwel@nsf.gov).
- Dr. Michael Steuerwalt, Applied Mathematics, Program Director, MPS, Mathematical Sciences, telephone: 703-292-4860, e-mail: [Dr.Michael.Steuerwalt.Division.of.Mathematical.Sciences.NSF/MPS.703-292-4860.msteuerw@nsf.gov](mailto:Dr.Michael.Steuerwalt.Division.of.Mathematical.Sciences.NSF/MPS.703-292-4860.msteuerw@nsf.gov).
- Dr. Lawrence Goldberg, Program Director, ENG, Electrical and Communications Systems, telephone: 703-292-8339, e-mail: [lgoldber@nsf.gov](mailto:lgoldber@nsf.gov).
- Dr. Farley Fisher, Program Director, ENG, Chemical and Transport Systems, telephone: 703-292-8371, e-mail: [ffisher@nsf.gov](mailto:ffisher@nsf.gov).
- Dr. Delcie Durham, Program Director, ENG, Design Manufacture and Industrial Innovation, telephone: 703-292-1330, e-mail: [ddurham@nsf.gov](mailto:ddurham@nsf.gov).

- Dr Kile Baker, Program Director, GEO, Atmospheric Sciences, telephone: 703-292-7060, e-mail: [kbaker@nsf.gov](mailto:kbaker@nsf.gov).
- Dr Thomas Bogdan, Program Director, GEO, Atmospheric Sciences, telephone: 703-292-8529, e-mail: [tbogdan@nsf.gov](mailto:tbogdan@nsf.gov).

For questions related to the use of FastLane, contact:

- Ramona Winkelbauer, Computer and FastLane Specialist, Physics, telephone: 703-292-7390, e-mail: [rwinkelb@nsf.gov](mailto:rwinkelb@nsf.gov).

## IX. OTHER PROGRAMS OF INTEREST

The NSF *Guide to Programs* is a compilation of funding for research and education in science, mathematics, and engineering. The NSF *Guide to Programs* is available electronically at <http://www.nsf.gov/cgi-bin/getpub?gp>. General descriptions of NSF programs, research areas, and eligibility information for proposal submission are provided in each chapter.

Many NSF programs offer announcements or solicitations concerning specific proposal requirements. To obtain additional information about these requirements, contact the appropriate NSF program offices. Any changes in NSF's fiscal year programs occurring after press time for the *Guide to Programs* will be announced in the NSF [E-Bulletin](#), which is updated daily on the NSF web site at <http://www.nsf.gov/home/ebulletin>, and in individual program announcements/solicitations. Subscribers can also sign up for NSF's [Custom News Service](http://www.nsf.gov/home/cns/start.htm) (<http://www.nsf.gov/home/cns/start.htm>) to be notified of new funding opportunities that become available.

## **ABOUT THE NATIONAL SCIENCE FOUNDATION**

The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Awardees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities and persons with disabilities to compete fully in its programs. In accordance with Federal statutes, regulations and NSF policies, no person on grounds of race, color, age, sex, national origin or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF, although some programs may have special requirements that limit eligibility.

*Facilitation Awards for Scientists and Engineers with Disabilities (FASSED)* provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the GPG Chapter 11, Section D.2 for instructions regarding preparation of these types of proposals.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation about NSF programs, employment or general information. TDD may be accessed at (703) 292-5090, FIRS at 1-800-877-8339.

## **PRIVACY ACT AND PUBLIC BURDEN STATEMENTS**

The information requested on proposal forms and project reports is solicited under the authority of the National Science Foundation Act of 1950, as amended. The information on proposal forms will be used in connection with the selection of qualified proposals; project reports submitted by awardees will be used for program evaluation and reporting within the Executive Branch and to Congress. The information requested may be disclosed to qualified reviewers and staff assistants as part of the proposal review process; to applicant institutions/grantees to provide or obtain data regarding the proposal review process, award decisions, or the administration of awards; to government contractors, experts, volunteers and researchers and educators as necessary to complete assigned work; to other government agencies needing information as part of the review process or in order to coordinate programs; and to another Federal agency, court or party in a court or Federal administrative proceeding if the government is a party. Information about Principal Investigators may be added to the Reviewer file and used to select potential candidates to serve as peer reviewers or advisory committee members. See Systems of Records, NSF-50, "Principal Investigator/Proposal File and Associated Records," 63 Federal Register 267 (January 5, 1998), and NSF-51, "Reviewer/Proposal File and Associated Records," 63 Federal Register 268 (January 5, 1998). Submission of the information is voluntary. Failure to provide full and complete information, however, may reduce the possibility of receiving an award.

An agency may not conduct or sponsor, and a person is not required to respond to an information collection unless it displays a valid OMB control number. The OMB control number for this collection is 3145-0058. Public reporting burden for this collection of information is estimated to average 120 hours per response, including the time for reviewing instructions. Send comments regarding this burden estimate and any other aspect of this collection of information, including suggestions for reducing this burden, to: Suzanne Plimpton, Reports Clearance Officer, Division of Administrative Services, National Science Foundation, Arlington, VA 22230.

*OMB control number:* 3145-0058.